

SYSTEMS AND METHODS USING NIC-BASED PREFETCHING FOR HOST TCP CONTEXT LOOKUP

ABSTRACT OF THE DISCLOSURE

Systems and methods using network interface card-based (NIC-based) prefetching
5 for host TCP context lookup are disclosed. The process generally includes hashing, by
the NIC, a packet received over the network, computing a host hash table cache line in a
host memory using the hash value and using a hash table pages table containing host
memory physical page addresses of a host hash table, and computing a host context table
cache line in a host memory using the hash value and using a context table pages table
10 containing host memory physical page addresses of a host context table. The NIC may
be initialized with the hash table pages table and the context table pages table as well as
with the a set number of hash node entries in the hash table of the host memory.